

Several birds were always to be seen in the harbour, but the species was not abundant.

59. STERNA ANTILLARUM (Less.).

Sterna superciliaris Vieill.; Cory, B. Bahamas, p. 213.

Sterna antillarum (Less.); Cory, Cat. W. Ind. B. p. 83.

♂ ad. Nassau, 10th May, 1898.

♀ ad. „ 18th June, 1898.

Several pairs of this little Tern visit the island in summer, and I think that they breed by some of the inland tidal lakes.

XLIV.—*Notes on the Birds observed on the Northern Parts of the Murman Coast, Russian Lapland, in 1899.* By HENRY J. PEARSON.

THE winter of 1898–99 and the spring of the present year have been the worst in the North of Europe for more than forty years; only the oldest inhabitants can remember any season when so much snow fell and remained unmelted till so late in the summer. This has caused serious loss to many industries in Norway and Russia, and disturbed the domestic arrangements of the multitude of birds which resort to the Arctic regions every year for the breeding-season. The following account of a visit to Russian Lapland must give a very imperfect picture of the bird-life to be observed there, and I feel sure the same districts would yield better results during a normal year.

Accompanied by my brother, Mr. Charles Pearson, I left England on May 11th, and arrived in Tromsö on the 18th. The country was buried in snow down to sea-level, and the main streets of the town were encumbered with four to five feet of snow, compressed into a solid mass by the winter traffic. On the islands off the coast, where at the same date in 1896 thousands of eggs of Gulls and other birds were to be seen, only a few Great Black-backed and Herring-Gulls had commenced to lay, and their nests were often surrounded by snow four inches deep. Leaving Tromsö on May 20th,

in a steamer I had chartered, we visited various islands, the Porsangerfjord, and other places, only to find winter practically in full possession of the country; and eventually we reached Vardö on the 30th.

I must ask the readers of 'The Ibis' to consult a map of Russian Lapland in order to follow our voyage. To the south of Vardö lies the great Varangerfjord, the western waters of which wash the Norwegian coast, and the southern that of Russian Lapland, the Ribatschi peninsula forming its eastern boundary. In the S.E. corner of the fjord lie two islands—Great and Little Henö—some 8 miles from the coast and due north of the entrance to Peisensfjord. These islands are the property of St. Trifon's monastery, which is situated on the Petschenga river, 18 versts from where it joins the sea at the head of Peisensfjord.

On the 31st of May, when we arrived at Great Henö, more than half its surface was covered with immense snow-drifts. Still the air and sea were alive with thousands of Arctic Terns and Puffins, while the shores were crowded with waders seeking food below high-tide mark. Only a few Great Black-backed Gulls had ventured to commence nesting. The next day we steamed into Peisensfjord, an inlet some ten miles long; but were soon stopped by ice, as for more than three miles the upper part was still entirely frozen. On the map published by Mr. Edward Rae in his book 'The White Sea Peninsula,' three lakes are shown on the Petschenga river, and the lines of forest-growth approach nearer the sea than in any other part of the Murman coast. It seemed probable this district would yield a great diversity of bird-life, and we had decided before leaving home to get there if possible. However, it was evidently not to be at present.

After spending some days in the lower parts of the fjord and the adjacent coasts, during which snow-storms were of constant occurrence and the filter-tap on deck was often frozen, we returned to Vardö on June 10th. Here we learned, in reply to our telegrams, that the rivers to the south were still frozen, and about fifty steamers were reported to be off

the entrance of the White Sea, waiting for the ice to allow them to reach Archangel.

On June 14th we at last reached the head of Peisenfjord, having forced a way through the remaining ice; but it was clearly impossible to get up the country for at least a fortnight. The river was blocked with masses of ice; snow lay 4 feet deep over most of the land; and the buds of the birch-trees had scarcely commenced to swell. The few bare places round the peasants' houses were, however, alive with Bluethroats, Pipits, Temminck's Stints, &c., and we therefore decided to make an excursion round the Ribatschi peninsula—steaming first to Vaidda Gûba, a small fishing-port close to its north-west point. The snow here was beginning to melt, and the birds had dispersed more over the country. Sibt Havolok, at the north-east extremity, was our next anchorage. This was at one time an important place, with church, hospital, &c.; but the fish having left the neighbouring sea, most of the population removed also. There are large marshes behind the town, which are evidently much frequented by Waders and Arctic Terns in normal years. On June 19th the ground was solid ice a few inches below the surface, and the birds were in flocks or pairing. Continuing our voyage round the south coast, we landed in every bay where the shores showed any considerable area free from snow, seeing little of interest beyond some Buffon's Skuas nesting. The Ribatschi peninsula consists chiefly of high ground which even in good seasons must have a very bare and desolate character. A number of lakes and tarns are scattered over the interior, forming the sources of several small rivers. We saw nothing that could possibly be called a tree, although some of the valleys contained low birches and willow-scrub. I do not think Geese breed commonly in the district, as a Norwegian said he had never seen their eggs, but his father had once found a nest many years ago. Port Novaya Zemlya (named by Lütke), at the head of the inlet separating the peninsula from the main, is only a collection of some dozen fishermen's huts; and the isthmus is scarcely an English mile across, with several well-marked

sea-beaches, showing that the sea was connected with the Varangerfjord in very recent geological times.

On June 22nd we entered Litsafjord, a deep indentation running into the mainland between the isthmus and Kola-fjord, and spent three days exploring the district round Litsa river. The country here was much freer from snow and the ice had gone out of the river; but the lakes—even within 100 feet of the sea-level—were still frozen. Our guide was a Finn, Johan Regina by name, who had been employed by Wolley for eighteen months in Lapland, and told us several incidents about him. Unfortunately everything was translated through two languages, or we might have learnt more.

Returning to Henö on the 26th, we spent three glorious days there in camp—days that one remembers long after the disagreeables of Arctic travel are forgotten—when the sun went round his course without a cloud in the sky; and the only indications of midnight were a coolness in the air, a slight decrease in the light for photographic purposes, and perhaps a little more restfulness among the noisy Arctic Terns. The snow had almost entirely melted, vegetation was rapidly springing into renewed life, large masses of marsh-marigold and *Trollius europæus* made the scene bright with their yellow flowers, and the lake, now free from ice, had often 150 Ducks on its surface. Sleep seemed to be rather a waste of time, and it was 5 A.M. before we could bring ourselves to turn in. I have never visited any other spot where bird-life was so numerous or so diversified; on the larger island—only four miles long—we recorded 38 species of birds.

Leaving the islands late on the 28th, we steamed up Peisenfjord, and at last, on July 2nd, succeeded in penetrating the interior as far as Petschenga lake (there is only one, not three), the twenty miles occupying twenty-four hours! Even this would have been absolutely impossible without the kind assistance of the monks of St. Trifon's monastery, who provided horses and carriages to convey us as far as possible, and men to carry the tents over the last three miles.

We remained encamped on the shore of the lake until the 12th, when mosquitoes made the district unbearable and forced us to retreat. During our stay we met with forty-one species of birds and found many of them nesting, fuller particulars of which will be found in the following pages.

In conclusion I would say, to any desirous of following our footsteps, it is necessary to obtain permission from the Russian Government, through our Foreign Office, to travel in the interior; and attention to this may save much after-trouble.

1. *TURDUS ILIACUS.*

The Redwing was common on the Litsa and Petschenga rivers, nesting generally in damp localities. All the nests found on the former river about June 22nd contained 6 eggs, nearly fresh, while those in the Petschenga district on July 4th had young.

2. *TURDUS PILARIS.*

Common in the same localities as the Redwing, and the incubation was in similar stages.

3. *SAXICOLA GENANTHE.*

There were several pairs of Wheatears on Henö, where they appeared to be breeding in the Puffins' holes. Nests with eggs were found near the Petschenga river from July 1st to 7th. They were placed above the line of tree and bush growth, with one exception. This was in the centre of a short log lying near some huts on Lake Arveden, and, thinking the bird came from underneath, we rolled the log over, but fortunately without breaking any of the 7 eggs.

4. *RUTICILLA PHENICURUS.*

A nest of the Redstart, with 6 eggs, was taken in the Litsa valley June 23rd, from the top of a rotten birch-stem. We found another nest with young in the Petschenga valley on July 7th.

5. *CYANECULA SUECICA.*

We saw the Red-spotted Bluethroat on Henö, and at several points of the Ribatschi peninsula, Litsa river, and Peisen-

fjord, but not in the upper part of the Petschenga valley. In all cases it was within a few miles of the sea. The nests up to June 29th contained only 1 to 4 eggs.

6. *PHYLLOSCOPUS TROCHILUS.*

The Willow-Wren was quite the commonest small bird in the inland districts. Nests contained full clutches of 7 eggs about July 4th.

7. *PARUS CAMTSCHATKENSIS.*

The only Tit seen during our stay in the country was a Siberian Marsh-Titmouse. It was shot near Petschenga lake on July 4th, and proved to be a female with incubation-spots.

8. *MOTACILLA ALBA.*

One or two pairs of White Wagtails were at most places visited, generally near the habitations of man. Eggs found on Henö on June 26th were slightly incubated.

9. *MOTACILLA VIRIDIS.*

Several pairs of Grey-headed Wagtails were seen near the mouth of the Petschenga river.

10. *ANTHUS PRATENSIS.*

The Meadow-Pipit was generally common. Eggs only slightly incubated were found till July 9th.

11. *ANTHUS CERVINUS.*

We found the Red-throated Pipit on both the Litsa and Petschenga rivers, nesting in marshy localities. Nests with 6 eggs were taken from June 22nd to July 10th.

12. *ANTHUS GUSTAVI?*

When we first landed at the head of Peisenfjord on June 15th the manure-heaps and small open spaces round the houses were alive with birds. Among these was a Pipit, very distinct from the Meadow-Pipits, being larger, with darker and broader stripes on the breast. It was only 15 yards away, and we watched it through our glasses some time. Unfortunately our guns were on board; and when we returned next day, this bird—with most of the others—was gone. I have no doubt, however, it was a Petchora Pipit.

13. COTILE RIPARIA.

We observed several birds, believed to be Sand-Martins, round the upper monastery on the Petschenga river; but shooting was not permitted there.

14. PASSER DOMESTICUS.

I saw a House-Sparrow on the monks' house at the head of Peisenfjord, June 16th; and, not being allowed to shoot it there, I persuaded it to go as far as the boundary-fence, where it fell a victim. A pair had young in the gable of this house on July 2nd.

15. FRINGILLA MONTIFRINGILLA.

A few pairs of Bramblings were seen on the Litsa and Trifonovka rivers, but it was only on reaching our camping-ground near Petschenga lake that the birds became common. We found a number of nests between July 2nd and 10th, all in birches, the greater part containing incubated eggs. The hens sat close; one pecked my finger before she would leave the nest, and another retained her seat while my brother climbed 20 feet up the thin birch-tree which held the nest.

16. LINOTA EXILIPES.

Coues's Redpolls were nesting near the Litsa and Petschenga rivers in birch and dwarf juniper, but not nearly so common as around Lake Ukanskoe in 1895.

17. EMBERIZA SCHÆNICLUS.

We saw Reed-Buntings near all the three rivers visited. The last nest found (July 11th) was in a hollow birch-stump, and consisted of a few grasses with chips of wood. As there were only 2 eggs, fresh, the bird had probably been disturbed.

18. PLECTROPHENAX NIVALIS.

Snow-Buntings were building among the rocks on Henö, June 7th. We saw them at most points visited on the Ribatschi peninsula, but never inland.

19. CALCARIUS LAPPONICUS.

Lapland Buntings were common on Henö, where we found several nests in the *Empetrum nigrum*, and in the tussocks of coarse grass, whose roots form mounds four to six feet

high. We also saw this species at most of the places visited near the sea, but not inland.

20. *OTOCORYS ALPESTRIS*.

For some time after our first arrival Shore-Larks were in flocks. Two nests were ready for eggs on June 18th at Vaidda Gûba, and on the 21st we found one with two eggs at Port Novaya Zemlya.

21. *PERISOREUS INFAUSTUS*.

A family party of Siberian Jays was in a marshy wood near the Litsa river—a spot containing more breeding birds than any other we passed through on the mainland. The young still showed a few traces of down among the feathers on June 24th.

22. *CORVUS CORAX*.

A Raven's nest, near the mouth of Peisenfjord, contained young with quill-feathers on June 6th. The parents probably went to Henö (8 or 9 miles off) for part of their food-supply, as we saw two hunting over that island, pursued vigorously by Terns and Skuas.

23. *CORVUS CORNIX*.

Hooded Crows were seen in Peisen and Litsa Fjords, but were not so common as in Norway.

24. *PICOIDES TRIDACTYLUS*.

We found a nest of the Three-toed Woodpecker with young in a rotten tree on July 3rd near the Petschenga river; unfortunately one of the old birds had been shot for identification before the nest was seen. Another pair came close to us the next day. Many of the dead trees in the district had been bored by this species.

25. *CUCULUS CANORUS*.

The Cuckoo was heard or seen on most days, in the wooded districts.

26. *SURNIA ULULA*.

We shot a Hawk-Owl out of a family party on July 7th near the Petschenga river; the others kept near us for some time. These were the only Owls seen inland.

27. NYCTEA SCANDIACA.

The fresh remains of a Snowy Owl were found on Henö.

28. BUTEO LAGOPUS.

Rough-legged Buzzards were much the commonest of the birds of prey in the inland districts. We found eggs up to July 3rd. One nest contained one egg only, so nearly hatched that the chick's call could be heard 12 yards away; while another held five young, with their quill-feathers showing. The latter number is unusually large. One parent of these five swooped within two yards of the intruder when at the nest, the only occasion on which I have known this species make a bold attempt to defend its young. Several nests were placed in Scotch firs.

29. HALIAËTUS ALBICILLA.

We saw three White-tailed Eagles over Litsafjord on June 23rd. A nest, placed on the face of a precipice near the head of the fjord, was empty at the time of our visit. In the Petschenga district our Finn guide also took us to a nest which he said belonged to this species; it was an immense structure of sticks, &c., in a Scotch fir, and had not apparently been occupied for the last two seasons.

30. PANDION HALIAËTUS.

We searched a considerable area round the Petschenga river in the hope of finding an Osprey's nest, but saw only one bird, which came to fish once in Petschenga lake. These poor birds are persecuted here as in other countries, for the Finns cut down any tree, during the winter, in which they find a last year's nest. Knowing that this district was absolutely undisturbed from March to the middle of July, I had great hope, until I heard the above, of finding Ospreys on the numerous lakes; but with a reward paid for both birds and eggs in Norway (I believe also in Sweden), and the birds systematically driven away in Russian Lapland, the species may well become scarce.

31. PHALACROCORAX CARBO. Cormorant.

32. PHALACROCORAX GRACULUS. Shag.

Several seen on different parts of the coast.

33. ANSER sp. ?

Several 'Grey' Geese were seen, and believed to be Bean-Geese, but we could not positively identify any of them.

34. CYGNUS MUSICUS.

A pair of Whooper Swans were seen on the Trifonovka river on June 29th. We obtained two eggs from a nest in the Petschenga district on July 6th; one was addled, the other slightly incubated. Our Finn, Ivan, expressed a strong opinion that the Eagles had taken the others.

35. MARECA PENELOPE.

A pair of Wigeon were on Henö, apparently nesting. We found a nest near Petschenga lake on July 2nd, and another on the 5th with eggs nearly fresh.

36. HARELDA GLACIALIS.

Long-tailed Ducks were very numerous along the whole coast. We also saw them inland as far as we penetrated.

37. SOMATERIA MOLLISSIMA.

A large number of Eiders were nesting on Henö; in fact they were nearly as common as on Stor Tamsö in the Porsangerfjord. We heard the value of the down had fallen so much that it scarcely paid to collect and clean.

38. CÆDEMIA NIGRA.

Common Scoters were seen on Henö and several parts of the coast. Three or four males were constantly on Petschenga lake, so their mates were probably nesting "somewhere" in the neighbouring woods; but to look for Ducks' nests in such a country is rather hopeless work, and finding them is largely a matter of chance.

39. CÆDEMIA FUSCA.

Velvet Scoters were nesting on Henö, June 28th, the eggs being slightly incubated. Several males were also on Petschenga lake, where they always kept separate from the Common Scoters, even when disturbed.

40. MERGUS MERGANSER.

The only two nests of Goosanders met with were in fisher-

men's huts near the Petschenga, the birds having entered in both cases through a broken window. One nest contained 15 eggs, and the hut was in a small village where at least one man was living at the time. We saw several pairs on Henö, and the species was common on most of the fjords visited.

41. *MERGUS SERRATOR*.

Red-breasted Mergansers were seen on Henö, and generally where the preceding species was noticed. A nest with 6 eggs was placed under a birch-tree on a small island in Lake Petschenga, partially concealed by some sticks.

42. *TETRAO UROGALLUS*.

Two female Capereailles seen near Lake Petschenga.

43. *LAGOPUS MUTUS*.

A pair of Ptarmigan were on high ground near Peisenfjord.

44. *LAGOPUS ALBUS*.

Willow-Grouse were met with in the Litsa and Petschenga valleys, but were not numerous anywhere, three being the greatest number ever seen in 10 hours' walk.

45. *EUDROMIAS MORINELLUS*.

We saw several Dotterels near Peisenfjord on June 3rd and 4th. A nest placed at an elevation of 850 feet, near the Petschenga, contained eggs just hatching on July 10th, and another bird was brooding three young on the same hill that day.

46. *ÆGIALITIS HIATICOLA*.

We first observed Ringed Plovers at Henö on June 13th, so they must have gone north later than usual this year. They were afterwards met with on several parts of the coast and near Petschenga lake.

47. *CHARADRIUS PLUVIALIS*.

A few pairs of Golden Plovers occupied suitable ground on the Litsa and Petschenga rivers.

48. *STREPSILAS INTERPRES*.

Turnstones were well represented among the numerous Waders feeding on the beach when we first visited Henö, all

so tame that they allowed us to approach within a few yards before taking wing. A nest with four eggs was found on June 13th among some dwarf sallows a foot high, at a time when half the island was covered with snow.

Between the 26th and 28th we took six more clutches, all obtained by watching the bird to the nest. Three of these were under stones near the shore, two in tussocks of grass, and one in a Puffin's hole; the three latter some distance from the sea. The sixth gave considerable trouble. We had noticed the birds during the day, and went up the hill about 10 P.M. to try for the nest. As we lay down some 80 yards apart, the birds took up a position 100 yards away from both of us. For twenty minutes they never moved more than a yard; then they worked gradually down to a point midway between us, the same bird always leading. They next turned towards me, and for half an hour I sat scarcely daring to wink—troubled, too, with a cough that endeavoured to assert itself. Nearer and nearer by many a zigzag the leading bird approached, until it was within six yards. Then an old Puffin put its head up out of one of the numerous holes near, regarded me steadily first with one eye and then the other, and decided promptly to retire again. This shook the Turnstones' confidence and caused a retreat. A careful search failed to show the nest; but when we went up next day the sentinel bird was off duty, and the other came out of a Puffin-hole close to our feet. The nest was eight yards from my seat of the night before, and contained three half-incubated eggs, placed on some dead sorrel-stalks 18 inches inside the burrow. We also saw these birds on the Ribatschi peninsula.

49. *HÆMATOPUS OSTRALEGUS.*

Oyster-catchers were common on Henö. One or two pairs were also seen at most places where we landed.

50. *PHALAROPUS HYPERBOREUS.*

We saw a number of the pretty Red-necked Phalaropes on Henö and the Ribatschi peninsula. The first nests were found on June 28th, some of them containing fresh eggs.

51. GALLINAGO CÆLESTIS.

Two or three birds, disturbed in a marsh near the lower monastery on the Petschenga, were thought to be Common Snipe.

52. TRINGA ALPINA.

When we first landed on Henö there were a far larger number of Dunlins than would probably nest there, and the greater part had left on our next visit. We also saw them on several parts of the Ribatschi peninsula and in Peisenfjord, but not inland. The first nest with eggs was found on June 24th.

53. TRINGA MINUTA.

Some 16 to 20 Little Stints were on Henö June 28th, but did not appear to be breeding. When we returned on July 13th there was no trace of them. However, we found a nest of four eggs on Little Henö, June 28th, the bird coming a foot from me as I blew the eggs, and often allowing my man to put his hand within 6 inches of it.

54. TRINGA TEMMINCKI.

Temminck's Stints were common on the shores of Peisenfjord, June 14th; also on Litsafjord. They were breeding on July 1st among rather thick birch-scrub some 200 yards from the Trifonovka river, the birds often settling on the birch-trees.

55. TRINGA STRIATA.

Several scores of Purple Sandpipers were feeding on the shore of Henö when we landed, May 31st, and were very tame. Many were still there on June 13th and 17th, but we saw none on July 13th. They were also common on the shores of the fjords during the early part of our visit.

56. MACHETES PUGNAX.

Ruffs were first seen on Henö June 13th. While in camp on the island, June 26th, four played and fought in a marsh near the tent for some time. We did not see the species in any other part of the country.

57. TOTANUS HYPOLEUCUS.

A number of Common Sandpipers were about Petschenga lake, and we found two nests there on July 5th, with eggs slightly incubated.

58. TOTANUS CALIDRIS.

One or two Redshanks were seen in most suitable localities.

59. LIMOSA sp. ?

Two Godwits were feeding on a sandbank near the ship in Litsafjord on the night of June 23rd, but we could not distinguish to which species they belonged.

60. NUMENIUS PHÆOPUS.

In both the Peisen and Litsa districts Whimbrel were fairly common.

61. STERNA MACRURA.

On May 31st Arctic Terns were over Henö in thousands; I have never seen so many together before. We first noticed a few single eggs on June 17th, and by the 24th the birds were nesting in all directions—on the wet sphagnum-moss in the marshes, on the *Empetrum nigrum* which covered the higher ground, and among the shingle of the shore; but there were no young, and of the eggs our men collected for eating few were more than half incubated. During a visit of two hours on July 13th we never saw a Tern on the island. Either they had hatched and reared their young in 17 days, or their nests had been robbed so often that they had given up the effort. In most cases the colour of the eggs agreed with their surroundings. We found young just hatched on July 9th, at an elevation of 700 feet, near Petschenga lake.

62. LARUS CANUS.

A number of Common Gulls were nesting on Henö. We also saw the birds on the Litsa and Petschenga rivers.

63. LARUS ARGENTATUS.

64. LARUS MARINUS.

Nesting on Henö. These species were also seen at several other parts of the coast.

65. *LARUS FUSCUS*.

Several Lesser Black-backed Gulls were constantly about the ship in Peisenfjord during the early part of our stay. We first saw them on Henö, June 26th; a large colony had then arrived, and were nesting near the shore down the east side of the island.

66. *RISSA TRIDACTYLA*.

An immense colony of Kittiwakes were breeding on the cliffs of Sharanov Point, at the south-east corner of Ribatschi peninsula, June 20th. Many of the eggs were much incubated, but we saw no young.

67. *STERCORARIUS CREPIDATUS*.

Richardson's Skuas were very common on Henö, the light and dark forms being nearly equal in number. We took the first egg on June 13th, and continued to see other eggs till July 13th, the latter probably belonging to birds we had disturbed before. One nest contained three eggs, all nearly fresh. These birds were also nesting on various points of the Ribatschi peninsula and near Litsafjord.

68. *STERCORARIUS PARASITICUS*.

Buffon's Skuas were nesting at two places on Ribatschi peninsula (June 20th) within an hour's walk of the sea and at no great elevation; the higher land was then all covered with snow. On July 9th three pairs had eggs, much incubated, at an elevation of 700 feet (considerably above the line of bush-growth), some miles beyond Petschenga lake. This species generally selects a breeding-place on high ground further from the sea than the preceding one.

69. *ALCA TORDA*.

We frequently saw Razorbills with the Puffins on Henö, and presumed they were also breeding in holes, as no suitable rocks or cliffs existed there.

70. *URIA GRYLLE*.

Black Guillemots were very common round Henö, and generally distributed along all the coasts visited.

71. FRATERCULA ARCTICA.

Immense numbers of Puffins were breeding on Henö, and the air at times appeared full of them. The Russians catch quantities by placing fishing-nets over the ground where holes are most plentiful. The earliest eggs, found June 5th, were under stones, as even on the 13th the peat was frozen hard one or two inches below the surface, and the old burrows contained ice.

72. COLYMBUS ADAMSI.

An immature bird of this species was brought on board, June 10th, in Peisenfjord; it had just been caught in the salmon-nets—a common fate for the Divers there, as several of the next species were also offered to us.

73. COLYMBUS ARCTICUS.

74. COLYMBUS SEPTENTRIONALIS.

Both species were numerous on all the fjords, because the lakes were frozen till nearly the end of June.

List of Birds observed on Great and Little Henö Islands, May 31st, June 1st, 7th, 13th, 17th, 26th, 28th, and July 13th, 1899.

- | | |
|------------------------|-------------------------------|
| 1. Wheatear. | 20. Ringed Plover. |
| 2. Bluethroat. | 21. Turnstone. |
| 3. Willow-Wren. | 22. Oyster-catcher. |
| 4. White Wagtail. | 23. Red-necked Phalarope. |
| 5. Meadow-Pipit. | 24. Dunlin. |
| 6. Snow-Bunting. | 25. Little Stint. |
| 7. Lapland Bunting. | 26. Purple Sandpiper. |
| 8. Shore-Lark. | 27. Ruff. |
| 9. Raven. | 28. Redshank. |
| 10. Snowy Owl. | 29. Arctic Tern. |
| 11. Cormorant. | 30. Common Gull. |
| 12. Grey Goose (sp.?). | 31. Herring-Gull. |
| 13. Wigeon. | 32. Great Black-backed Gull. |
| 14. Long-tailed Duck. | 33. Lesser Black-backed Gull. |
| 15. Eider. | 34. Richardson's Skua. |
| 16. Common Scoter. | 35. Razorbill. |
| 17. Velvet Scoter. | 36. Black Guillemot. |
| 18. Goosander. | 37. Puffin. |
| 19. Merganser. | 38. Red-throated Diver. |

*List of Birds observed at Viadda Gúba, N.W. point of the
Ribatschi Peninsula, June 18th, 1899.*

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|---------------------|-----------------------|
| 1. Bluethroat. | 8. Ringed Plover. |
| 2. White Wagtail. | 9. Golden Plover. |
| 3. Meadow-Pipit. | 10. Turnstone. |
| 4. Snow-Bunting. | 11. Dunlin. |
| 5. Lapland Bunting. | 12. Purple Sandpiper. |
| 6. Shore-Lark. | 13. Redshank. |
| 7. Eider Duck. | 14. Arctic Tern. |

Gulls in harbour not identified.

*Sibt Havolok, N.E. point of Ribatschi Peninsula,
June 19th, 1899.*

- | | |
|------------------------|------------------------------|
| 1. White Wagtail. | 11. Golden Plover. |
| 2. Meadow-Pipit. | 12. Oyster-catcher. |
| 3. Snow-Bunting. | 13. Red-necked Phalarope. |
| 4. Lapland Bunting. | 14. Dunlin. |
| 5. Shore-Lark. | 15. Temminck's Stint. |
| 6. Raven. | 16. Arctic Tern. |
| 7. Cormorant. | 17. Great Black-backed Gull. |
| 8. Grey Goose (sp. ?). | 18. Richardson's Skua. |
| 9. Eider Duck. | 19. Buffon's Skua. |
| 10. Dotterel. | 20. Black Guillemot. |

South Coast of Ribatschi Peninsula, June 20th and 21st, 1899.

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| 1. Redwing. | 13. Willow-Grouse. |
| 2. Wheatear. | 14. Ringed Plover. |
| 3. Bluethroat. | 15. Golden Plover. |
| 4. White Wagtail. | 16. Oyster-catcher. |
| 5. Meadow-Pipit. | 17. Red-necked Phalarope. |
| 6. Red-throated Pipit. | 18. Dunlin. |
| 7. Lapland Bunting. | 19. Temminck's Stint. |
| 8. Shore-Lark. | 20. Redshank. |
| 9. Raven. | 21. Arctic Tern. |
| 10. Falcon (sp. ?). | 22. Kittiwake. |
| 11. Rough-legged Buzzard. | 23. Richardson's Skua. |
| 12. Long-tailed Duck. | 24. Buffon's Skua. |

Litsa River and Fjord, June 22nd and 24th, 1899.

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| <ol style="list-style-type: none"> 1. Redwing. 2. Fieldfare. 3. Redstart. 4. Bluethroat. 5. Willow-Wren. 6. White Wagtail. 7. Meadow-Pipit. 8. Red-throated Pipit. 9. Brambling. 10. Coues's Redpoll. 11. Reed-Bunting. 12. Shore-Lark. 13. Siberian Jay. 14. Hooded Crow. 15. Cuckoo. 16. Rough-legged Buzzard. 17. White-tailed Eagle. | <ol style="list-style-type: none"> 18. Cormorant. 19. Grey Goose (sp. ?). 20. Long-tailed Duck. 21. Common Scoter. 22. Goosander. 23. Willow-Grouse. 24. Ringed Plover. 25. Golden Plover. 26. Temminck's Stint. 27. Redshank. 28. Godwit (sp. ?). 29. Whimbrel. 30. Arctic Tern. 31. Common Gull. 32. Great Black-backed Gull. 33. Richardson's Skua. |
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Peisenfjord District, within two miles of salt water.

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| <ol style="list-style-type: none"> 1. Redwing. 2. Fieldfare. 3. Wheatear. 4. Bluethroat. 5. Willow-Wren. 6. White Wagtail. 7. Grey-headed Yellow Wagtail. 8. Meadow-Pipit. 9. Petchora Pipit. 10. Red-throated Pipit. 11. House-Sparrow. 12. Brambling. 13. Coues's Redpoll. 14. Snow-Bunting. 15. Lapland Bunting. 16. Shore-Lark. 17. Raven. 18. Hooded Crow. 19. Cuckoo. 20. Rough-legged Buzzard. 21. Cormorant. 22. Grey Goose (sp. ?). 23. Whooper Swan. 24. Long-tailed Duck. 25. Eider Duck. | <ol style="list-style-type: none"> 26. Velvet Scoter. 27. Goosander. 28. Ptarmigan. 29. Dotterel. 30. Ringed Plover. 31. Golden Plover. 32. Oyster-catcher. 33. Red-necked Phalarope. 34. Common Snipe (?). 35. Dunlin. 36. Temminck's Stint. 37. Purple Sandpiper. 38. Redshank. 39. Whimbrel. 40. Arctic Tern. 41. Lesser Black-backed Gull. 42. Kittiwake. 43. Richardson's Skua. 44. Buffon's Skua. 45. Black Guillemot. 46. White-billed Great Northern Diver. 47. Black-throated Diver. 48. Red-throated Diver. |
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Petschenga Lake and District, July 3rd and 12th, 1899.

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| 1. Redwing. | 22. Osprey. |
| 2. Fieldfare. | 23. Whooper Swan. |
| 3. Wheatear. | 24. Wigeon. |
| 4. Redstart. | 25. Long-tailed Duck. |
| 5. Willow-Wren. | 26. Common Scoter. |
| 6. Siberian Tit. | 27. Velvet Scoter. |
| 7. White Wagtail. | 28. Goosander. |
| 8. Grey-headed Wagtail. | 29. Merganser. |
| 9. Meadow-Pipit. | 30. Capercaillie. |
| 10. Red-throated Pipit. | 31. Willow-Grouse. |
| 11. Sand-Martin (?). | 32. Dotterel. |
| 12. Brambling. | 33. Ringed Plover. |
| 13. Coues's Redpoll. | 34. Golden Plover. |
| 14. Reed-Bunting. | 35. Common Sandpiper. |
| 15. Shore-Lark. | 36. Redshank. |
| 16. Hooded Crow (?). | 37. Whimbrel. |
| 17. Three-toed Woodpecker. | 38. Arctic Tern. |
| 18. Cuckoo. | 39. Common Gull. |
| 19. Hawk-Owl. | 40. Buffon's Skua. |
| 20. Rough-legged Buzzard. | 41. Black-throated Diver. |
| 21. White-tailed Eagle (?). | |

XLV.—*On some Hornbill Embryos and Nestlings.* By R. SHELFORD, B.A. (Curator of the Sarawak Museum). *With Field-notes by C. HOSE.*

(Plates VIII.—X.)

THE material forming the subject of this paper consists of one 14-days-old embryo of *Anthracoceros malayanus* (Stage 1); a nearly ripe embryo of *Buceros rhinoceros*, another of *Rhytidoceros undulatus* (Stage 2); one newly-hatched nestling of *B. rhinoceros*, two (of approximately the same age) of *R. undulatus* (Stage 3); a six-weeks-old nestling of *B. rhinoceros* (Stage 4); and two young specimens of *A. malayanus*, just capable of flight (Stage 5).

I am indebted to Mr. G. J. Sands, Government Planter, for presenting me with the embryo and nestlings of *R. undulatus*, and to Mr. C. Hose, Resident of Baram, for the loan of all the rest of the material. To both these gentlemen I herewith beg to tender my most grateful thanks.